

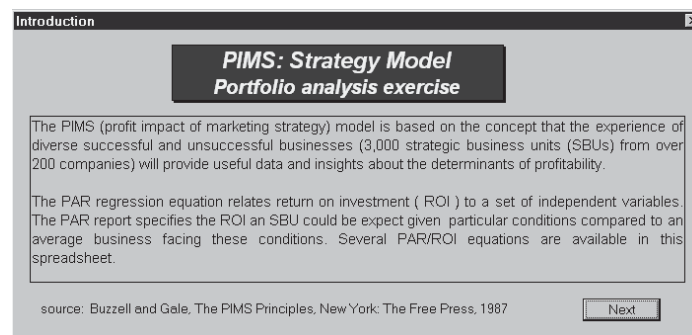
# 10. TUTORIAL FOR THE PIMS STRATEGY MODEL (pims.xls)

## CASE: PORTFOLIO ANALYSIS EXERCISE, P. 223

The PIMS spreadsheet implements the PIMS return on investment (ROI) models. PIMS (Profit Impact of Marketing Strategy) is based on the concept that data drawn from the pooled experience of a diversity of successful businesses and analyzed through regression will provide insights and guidance for managing businesses profitably. PIMS is based on data from over 3000 businesses from over 200 companies.

We have incorporated data for four strategic business units (SBUs) into the PIMS model here; those SBUs are the ones described in the “Portfolio Analysis” included with the GE: Portfolio Planning exercise.

To start the program, go to the **Model** menu and select **PIMS: Strategy Model** to see the **Introduction** screen.



Click **Next** to get to the **Main Menu**. Four SBUs corresponding to the portfolio exercise in the text are built into the program: TRANS, SALT, UBC, and POWER. To select an SBU for analysis, click **Built-In** at the bottom right-hand side of the screen.

SBU: TRANS	
Real Market Growth Rate (-20~40)	0
Rate of Price Inflation (-5~30)	1.2
Purchase Concentration (5~100)	60
% Unionization (0~100)	44.1
Low Purchase Amount (0 or 1)	
- Low Importance	1
- High Importance	0
High Purchase Amount (0 or 1)	
- Low Importance	0
- High Importance	0
Exports-Imports, % (-25~35)	-10
Customized Products (0 or 1)	1
Market Share (1~75)	18
Relative Quality (-25~85)	20
% New Products (0~70)	4
Marketing as % of Sales (1~40)	7
R&D as % of Sales (0~12)	1.8
Inventory as % of Sales (2~55)	20
Fixed Capital Intensity (4~110)	19
Plant Newness (20~90)	48
Capacity Utilization, % (40~110)	78
Employee Productivity (10~160)	38
Vertical Integration (10~92)	51
FIFO Inventory Valuation (0 or 1)	1

Analysis Help Cancel Quit

Data Set Maintenance Area

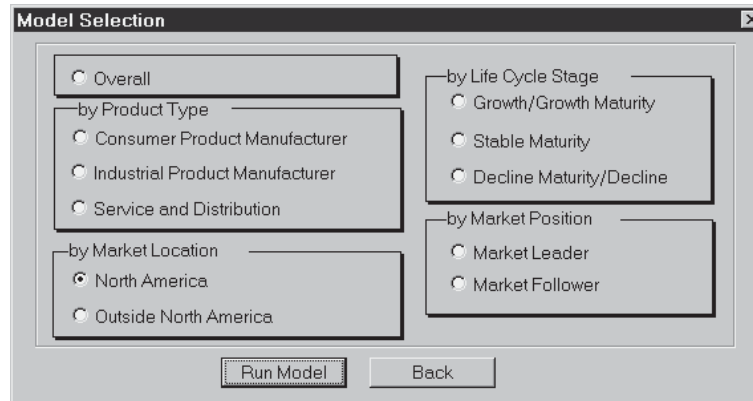
☒ Built-In ☐ User Defined

Save As Delete TRANS

\* Tutorial 10, June 2005

After selecting an SBU and possibly modifying the built-in data, click **Analysis** to activate the par-report models.

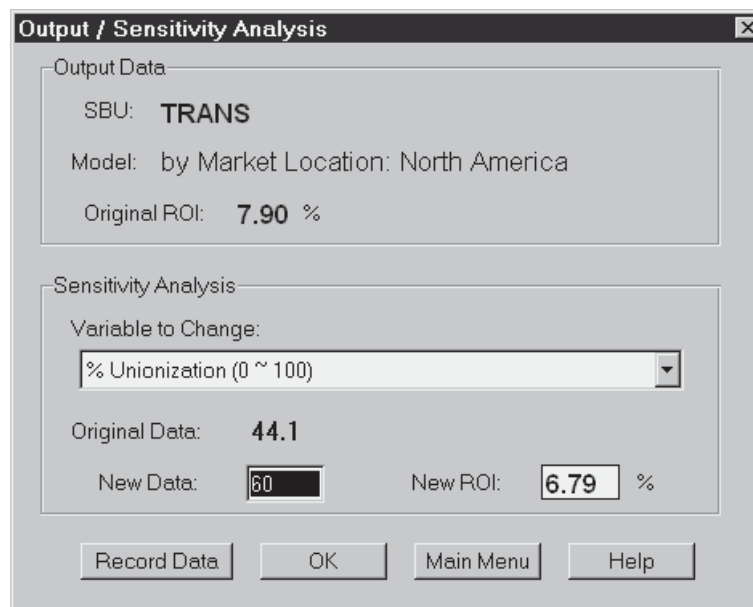
Using the next screen, **Model Selection**, you can specify a particular model that best fits your context.



The **Model Selection** dialog box contains several radio button groups for selecting a model. The **Overall** group has one option, **Overall**. The **by Product Type** group has three options: **Consumer Product Manufacturer**, **Industrial Product Manufacturer**, and **Service and Distribution**. The **by Market Location** group has two options: **North America** (selected) and **Outside North America**. The **by Life Cycle Stage** group has three options: **Growth/Growth Maturity**, **Stable Maturity**, and **Decline Maturity/Decline**. The **by Market Position** group has two options: **Market Leader** and **Market Follower**. At the bottom are **Run Model** and **Back** buttons.

When you have specified your model, click **Run Model** to activate the ROI analysis.

You can now see how sensitive the model output is to changes in a single input. Here we changed Unionization from the original 44.1 percent to 60 percent by typing in this number in the **New Data** slot, to produce this result:



The **Output / Sensitivity Analysis** dialog box displays the results of the model. The **Output Data** section shows: **SBU: TRANS**, **Model: by Market Location: North America**, and **Original ROI: 7.90 %**. The **Sensitivity Analysis** section shows: **Variable to Change:** **% Unionization (0 ~ 100)** (selected in a dropdown), **Original Data: 44.1**, **New Data: 60** (entered in a text box), and **New ROI: 6.79 %**. At the bottom are **Record Data**, **OK**, **Main Menu**, and **Help** buttons.

If you want to save this case, click **Record Data** to store your data in the wshRecord sheet. You can access this sheet by going to the **Model** menu in the menu bar, choosing **Main Menu**, clicking **Cancel**, and selecting the wshRecord sheet.

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wshRecord wshData

Marketing Engineering - Pims

File Edit View Insert Format Tools Data Window Model Help

A1 Sensitivity Analysis Summary Report

	A	B	C	D	E	F
1	<b>Sensitivity Analysis Summary Report</b>					
2						
3	<i>field</i>	<i>Case Name</i>	<i>TRANS</i>			
4	Real Market Growth Rate (-20 ~ 40)			0		
5	Rate of Price Inflation (-5 ~ 30)			1.2		
6	Purchase Concentration (5 ~ 100)			60		
7	% Unionization (0 ~ 100)			44.1		
8	Low Purchase Amount -Low Importance (0 or 1)			1		
9	Low Purchase Amount -High Importance (0 or 1)			0		
10	High Purchase Amount -Low Importance (0 or 1)			0		
11	High Purchase Amount -High Importance (0 or 1)			0		
12	Exports-Imports, % (-25 ~ 35)			-10		
13	Customized Products (0 or 1)			1		
14	Market Share (1 ~ 75)			18		
15	Relative Quality (-25 ~ 85)			20		
16	% New Products (0 ~ 70)			4		
17	Marketing as % of Sales (1 ~ 40)			7		
18	R&D as % of Sales (0 ~ 12)			1.8		
19	Inventory as % of Sales (2 ~ 55)			20		
20	Fixed Capital Intensity (4 ~ 110)			19		
21	Plant Newness (20 ~ 90)			48		
22	Capacity Utilization, % (40 ~ 110)			78		
23	Employee Productivity (10 ~ 160)			38		
24	Vertical Integration (10 ~ 92)			51		
25	FIFO Inventory Valuation (0 or 1)			1		
26	<b>Model Selected</b> by Market Location: North America					

Ready Sum=0 NUM

To save the data as a user-defined case, click **Save As** in the **Main Menu** dialog. You will be prompted to enter a data-set name. The data set will be stored as a user-defined set.

In a similar fashion, you can delete any of the user-defined data sets by going to the **Main Menu** and clicking **Delete**.

## GLOSSARY OF VARIABLES USED BY THE PIMS PROGRAM

**Capacity utilization:** The average rate of capacity utilization during a year. The rate of utilization equals net sales plus or minus change in finished goods inventory divided by standard capacity. The standard capacity is defined as the dollar value of the maximum output possible for the Strategic Business Unit (SBU) under normal operating conditions.

**Customized products:** Products customized for individual customers (index = 1) or standardized for all customers (index = 0).

**Employee productivity (value added per employee):** A measure in thousands of dollars obtained by dividing total sales by the number of full-time equivalent employees.

**Exports and imports:** The percentage of industry sales that is accounted for by exports and imports. Notice that this is defined in terms of the industry in which the Strategic Business Unit competes.

**FIFO inventory valuation:** Whether the method of valuing inventory is first in, first out (FIFO) (index = 1) or not (index = 0). This factor affects taxes and consequently reported profits.

**Fixed capital intensity:** The gross book value of plant and equipment expressed as a percentage of sales. This definition excludes depreciation and working capital.

**Inventory as a percentage of sales:** Average inventories (including raw materials, components, work-in-process, and finished goods) expressed as a percentage of the annual sales of the Strategic Business Unit.

**Market share:** The market share for the Strategic Business Unit in the market it serves.

**Marketing as a percentage of sales:** The total annual marketing expenditures (sales force, advertising, media, sales promotion, and other marketing costs) expressed as a percentage of annual sales of the Strategic Business Unit.

**Percent new products:** The percentage of the Strategic Business Unit's total sales that are derived from products introduced during the three preceding years.

**Percent unionization:** The percentage of the Strategic Business Unit's total employees (managerial, nonmanagerial, both salaried and hourly) that are unionized.

**Plant newness:** The ratio of the net book value of plant and equipment to gross book value expressed as a percentage.

**Purchase amount:** The dollar amount of a typical purchase transaction with an end user or immediate customer. If this is less than \$1000, it is generally considered to be low (index = 0). If the purchase amount is high, the index has a value equal to 1.0.

**Purchase concentration:** The percentage of the Strategic Business Unit's direct customers that accounted for 50 percent of its sales.

**Purchase importance:** An index based on the proportion of the typical customer's or end user's annual purchases that are for the types of products and services the Strategic Business Unit sells. If you think this is high (say >5 percent), you can give the index a value equal to 1.0.

**R&D as a percentage of sales:** R&D expenses (excluding basic research carried out at the corporate level) expressed as a percentage of the annual sales of the Strategic Business Unit.

**Rate of inflation:** The rate at which the Strategic Business Unit's selling prices increase.

**Real market growth rate:** The rate at which the Strategic Business Unit's sales increase in the market it serves, adjusted for inflation. The served market is part of the overall market for which the Strategic Business Unit has a suitable product to offer and uses a marketing program to reach this portion of the total market.

**Relative product quality:** An index based on the percentage of the Strategic Business Unit's sales volume accounted for by products and services that customers assess as "Superior," "Equivalent," and "Inferior" to those available from the three leading competitors. The index is computed by subtracting the percentage of inferior-quality sales from the percentage of superior-quality sales.

**Vertical integration:** A measure of value added calculated as the percentage of sales of the Strategic Business Unit, equal to total sales minus all purchases (materials, components, labor, supplies, and energy) by a Strategic Business Unit from other businesses, including businesses within the same parent corporation.